

Abstract

A ballast having a microprocessor embedded therein is controlled via four inputs. The ballast includes a high-voltage phase-controlled signal provided by a dimmer and an infrared (IR) receiver through which the ballast can receive data signals from an IR transmitter. The ballast can also receive commands from other ballasts or a master control on the serial digital communication link, such as a DALI protocol link. The fourth input is an analog signal, which is simply a DC signal that linearly ranges in value from a predetermined lower limit to a predetermined upper limit, corresponding to the 0% to 100% dimming range of the load. The output stage of the ballast includes one or more FETs, which are used to control the current flow to the lamp. Based on these inputs, the microprocessor makes a decision on the intensity levels of the load and directly drives the FETs in the output stage.